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Washington, D.C. 20231 on March 1, 2004

INFORMATION DISCLOSURE **STATEMENT** Patent Application Docket No. UF-318X Serial No. 10/613,963

Margaret Efron, Patent Attorney

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit

Applicant(s)

Sartaj Kumar Sahni, Haibin Lu

Serial No.

10/613,963

Filed

July 3, 2003

For

Dynamic IP Router Tables Using Highest-Priority Matching

Conf. No.

6767.

2661

**Assistant Commissioner for Patents** Washington, D.C. 20231

## INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§1.97 AND 1.98

Sir:

In accordance with 37 CFR §1.56, the references listed on the attached form PTO/SB/08 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application. A copy of each cited reference is enclosed.

This information is being submitted subsequent to the later of three months after the filing date of the present application or the mailing of the first Office Action on the merits, but before the mailing of a final action or the notice of allowance. Please charge the fee of \$180.00 to Deposit Account No. 19-0065.

It is respectfully requested that the references cited on the attached form PTO/SB/08 be considered in the examination of the subject application and that their consideration be made of record.

The applicant respectfully asserts that the substantive provisions of 37 CFR  $\S\S1.97$  and 1.98 are met by the foregoing statement.

Respectfully submitted,

Margaret Efron Patent Attorney

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Enclosure: Form PTO-1449

PTO/SB/08A (08-03) Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A/PTO				Complete if Known			
INICODIA	TION DICC		IDE	Application Number	10/613,963		
	ATION DISC			Filing Date	July 3, 2003		
STATEMENT BY APPLICANT				First Named Inventor	Sartaj Kumar Sahni		
(u	se as many sheet	s as nec	essary)	Art Unit .	2661		
				Examiner Name			
Sheet 1 of 3		Attorney Docket Number	UF-318X				

U.S. PATENT DOCUMENTS							
Examiner Initials*	Cite No. 1	Document Number Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
	U1	US 4,251, 861	02-17-1981	Mago			
	U2	US 4,833, 468	05-23-1989	Larson <i>et al</i> .			
	U3	US 5,555,405	09-10-1996	Griesmer et al.			
	U4	US 5,701,467	12-23-1997	Freeston			
	U5	US 5,787,430	07-28-1998	Doeringer et al.			
	U6	US 5,909,440	06-01-1999	Ferguson <i>et al.</i>			
	U7	US 6,018, 524	01-25-2000	Turner et al.			
	U8	US 6,021,131	02-01-2000	Even			
	U9	US 6,041,053	03-21-2000	Douceur et al.			
	U10	US 6,061,712	05-09-2000	Tzeng			
	U11	US 6,092,072	07-18-2000	Guha et al.	•		
	U12	US 6,157,955	12-05-2000	Narad <i>et al</i> .			
	U13	US 6,212,184	04-03-2001	Venkatachary et al.			
	U14	US 6,289,013	09-11-2001	Lakshman <i>et al</i> .			
	U15	US 6,335,932	01-01-2002	Kadambi <i>et al</i> .			
	U16	US 6,341,130	01-22-2002	Lakshman <i>et al.</i>			

	FOREIGN PATENT DOCUMENTS							
		Foreign Patent Document	5	N	Pages, Columns, Lines,			
Examiner Initials*	Cite No. 1	Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>		
	F1							
	F2							

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Signature	[ C	onsidered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at <a href="www.uspto.gov">www.uspto.gov</a> or MPEP901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard T.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Complete if Known Substitute for form 1449B/PTO Application Number 10/613,963 INFORMATION DISCLOSURE **Filing Date** July 3, 2003 STATEMENT BY APPLICANT First Named Inventor Sartaj Kumar Sahni **Group Art Unit** 2661 (use as many sheets as necessary) **Examiner Name** of **Attorney Docket Number UF-318X** Sheet 3

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	R1	DEGERMARK, MIKAEL, et al. (1997) "Small Forwarding Tables for Fast Routing Lookups" ACM SIGCOMM Proceedings of the ACM SIGCOMM '97 conference on Applications, technologies, architectures, and protocols for computer communication. pages 3-14.	
	R2	DOERINGER, W., G. KARJOTH, and M. NASSEHI (1996) "Routing on longest-matching prefixes" <i>IEEE/ACM Transactions on Networking</i> , 4(1): pages 86-87.	
	R3	ERGUN, FUNDA, et al. (2001) "A Dynamic Lookup Scheme for Bursty Access Patterns" <i>Proceedings of IEEE INFOCOM</i> pages 1-10.	
	R4	GUPTA, P. and N. MCKEOWN (2000) "Dynamic algorithms with worst-case performance for packet classification" <i>IFIP Networking</i> pages 528-539.	
	R5	LAMPSON, BUTLER, VENKATACHARY SRINIVASAN, and GEORGE VARGHESE (June 1999) "IP Lookups Using Multiway and Multicolumn Search" <i>IEEE/ACM Transactions on Networking Vol. 7, No. 3, pages 324-334</i>	
	R6	LU, H. and SAHNI, S. (2003) "O (log n) dynamic router-tables for prefixes and ranges" IEEE Symposium on Computers and Communications, pages 1-42	
	R7	NILSSON, STEFAN and GUNNAR KARLSSON (1998) "Fast address lookup for Internet routers" <i>Proceedings of IEEE Broadband Communications</i> (enclosed copy pages numbered 9-18).	
	R8	RUIZ-SANCHEZ, M., E. BIERSACK, and W. DABBOUS (Mar/Apr 2001) "Survey and taxonomy of IP address lookup algorithms" <i>IEEE Network</i> , 15(2): pages 8-23.	
	R9	SAHNI, SARTAJ and KUN SUK KIM "Data Structures of IP Lookup with Bursty Access Patterns" www.cise.ufl.edu/~sahni (enclosed copy pages numbered 1-5)	
	R10	SAHNI, SARTAJ and KUN SUK KIM (2001) "Efficient Construction of Fixed-Stride Multibit Tries for IP Lookup" Proceedings of 8 <sup>th</sup> IEEE Workshop on Future Trends of Distributed Computing Systems pages 178-184 (enclosed copy pages numbed 1-7).	

Examiner	·	Date
Signature		Considered

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	R11	SAHNI, SARTAJ and KUN SUK KIM (2002) "Efficient Construction of Variable-Stride Multibit Tries for IP Lookup" Proceedings of IEEE Symposium on Applications and the Internet (SAINT) pages 220-229 (enclosed copy pages numbered 1-8).				
	R12	SAHNI, SARTAJ and KUN SUK KIM (July 2002) "O(log n) Dynamic Packet Routing" 7 <sup>th</sup> IEEE Symposium on Computers and Communications. Pages 1-29				
	R13	SAHNI, SARTAJ, KUN SUK KIM, and HAIBIN LU (May 2002) "Data Structures for One-Dimensional Packet Classification Using Most-Specific-Rule Matching" International Symposium on Parallel Architectures, Algorithms, and Networks (ISPAN) pages 3-14 (enclosed copy pages numbered 1-12).				
	R14	SKLOWER, KEITH (1991) "A Tree-Based Packet Routing Table for Berkeley Unix" <i>Proceedings of 1991 Winter USENIX Conference</i> pages 93-99 (enclosed copy pages numbered 1-4).				
	R15	SRINIVASAN, V. and G. VARGHESE (Feb. 1999) "Faster IP Lookups Using Controlled Prefix Expansion" ACM Transactions on Computer Systems Vol.17, issue 1, pages 1-40 (enclosed copy pages numbered 1-21).				
	R16	SURI, S., G. VARGHESE, and P. WARKHEDE (2001) "Multiway range trees: Scalable IP lookup with fast updates" <i>Proceedings of Globecom '01</i> .				
	R17	WALDVOGEL, MARCEL et al. (1997) "Scalable High Speed IP Routing Lookups" Proceedings of the ACM SIGCOMM '97 Conference on Applications, technologies, architectures, and protocols for computer communication. pages 25-36 (enclosed copy pages numbered 1-12).				
	R18					
	R19					
	R20					
	R21					
	R22					

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Signature	ſ.,			Considered		

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